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# OSGeo Journal

The Journal of the Open Source Geospatial Foundation

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## In This Volume

**Real World Implementations of Open Source software**

Introducing Mapbender, deegree, openModeller ...

Understanding Spatial Relationships

Examining the Web Processing Server (WPS) Specification

Package Interaction - GRASS-GMT, Tikiwiki, PyWPS, GRASS-R ...

Software Updates

News, and more...



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## Event Reports

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# North Carolina OSGeo User Group Meets

Following the 2007 NC GIS Conference

by Julie Harrell

Bi-annually, North Carolina GIS professionals hold a statewide GIS conference to showcase their many exemplary projects and initiatives. This year was the 20th anniversary of the NC GIS Conference, one of the nations oldest state-level GIS events, and had over 950 attendees, 159 presenters, and 58 exhibitors

On March 1st, a small group of dedicated, open-minded GIS professionals led by Dr. Helena Mitsova (of the renowned GRASS project fame) held the first OSGeo affiliated NC Open Source GIS user group meeting at the 2007 North Carolina GIS Conference in Winston Salem, NC, USA.

There were approximately 20 attendees, with a majority of the group who signed up for a future listserv being of the University persuasion. There were also a handful of Federal, State and Local Government representatives. Two staff members from an enormous commercial GIS software provider also attended.

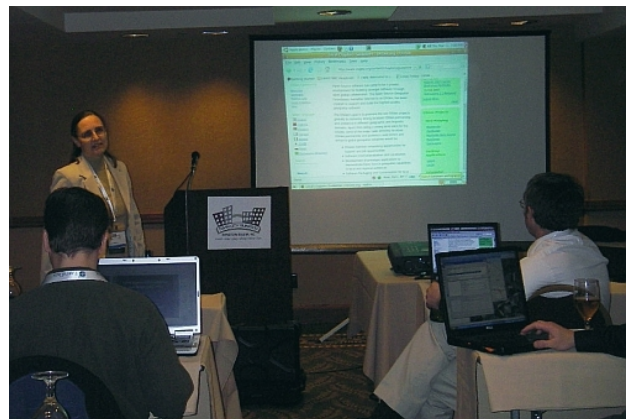


Figure 1: Helena introduces OSGeo and gives a tour of the OSGeo wiki site

The informal evening meeting was held after the main GIS conference, and the agenda consisted of the following topics:

**Welcome** (Julia Harrell, GIS Coordinator, NC Department of Environment and Natural Resources - NC DENR)

**Short introduction to the OSGeo organization** and discussion of the NC Affiliated OSGeo user group and its mission (Dr. Helena Mitsova, Research Associate Professor with North Carolina State University Department of Marine Earth and Atmospheric Sciences)

**Short presentation and demo of QGIS and uDig** Open Source Desktop GIS Software (Doug Newcomb,

*System Administrator with the US Fish and Wildlife Services Raleigh, NC Office)*

**Discussion of potential Open Source GIS Curriculum offerings** and a 1-day, hands-on Open Source GIS workshop later this summer (*Rodney Jackson, Director of the Geospatial Technology Corporate and Continuing Education Program at Central Piedmont Community College in Charlotte, NC*)

**Briefing on upcoming 2nd Annual Open Source GIS Conference (OSG-SD)** at San Diego State University, and a recap of last years event (*Dana Nibby, GIS Database Analyst with the NC Department of Transportation GIS Unit*)

**Demo of GAIA3** for Incident Response, a free and interoperable application created with a 2006 FGDC CAP grant by The Carbon Project, NC DENR, the City of Charlotte, and Wake County GIS Departments (*Jeff Harrison, President & CEO, The Carbon Project*)

**Announcement of the next day's Open Source enhanced GIS Conference presentations** (*Julia Harrell, GIS Coordinator, NC DENR*)

**Texas Mesonet:** Processing Large Datasets in Real Time (*Gerry Creager, Texas A&M University*)

**Geospatial Web Services and Scientific Workflows** for Distributing and Modeling Marine Mammal Data (*Dr. Patrick Halpin, Duke University*)

**Developing the NCCOOS Coastal Data Viewer:** Challenges in Real Time Marine GIS (*Jesse Cleary, UNC Chapel Hill*)

**OpenGIS Web Services** and Service Oriented Architecture (*Tobin Bradley, GISP, Mecklenburg County, NC*)



Figure 2: NC OSGeo User Group Attendees

## Low Cost High Value Web Mapping

**A Whirlwind Survey of Free and Open Source GIS Solutions**

**Panel of presenters:**

**PostgreSQL/PostGIS:** Spatially Enabled Relational Databases (*Tobin Bradley, GISP, Mecklenburg County NC*)

**PrimaGIS:** Collaborative mapping system for Plone CMS (*Chris Calloway, UNC Chapel Hill*)

**Web Clients:** Community MapBuilder & MapBender (*Julia Harrell, NC DENR*)

**Minnesota Mapserver, Chameleon:** (*Tom Melhuish, WebInsights*)

**GRASS GIS:** (*Dr. Helena Mitsova, North Carolina State University*)

**Best of the Rest:** GDAL/OGR, CartoWeb, GeoServer, MapGuide Open Source (*Doug Newcomb, US Fish & Wildlife Service*)

**Mashups:** The Non-Profit/Community Perspective (*Wansoo Im, The Center for Community Mapping*)

**Southeastern Gap Analysis:** Products and Accessibility (*Todd Earnhardt and Jim White, NC State University*)

**Econet:** NCs Environment and Climate Network for Real-time Weather Modeling (*Ryan Boyles, North Carolina State Climatologist, NC State University*) Note:

All 2007 NC GIS Conference Presentations will be available for download from the NC GIS Conference website<sup>1</sup> within a few weeks.

<sup>1</sup>NC GIS Conference website: <http://www.cgia.state.nc.us/ncgis2007>

# Activity Report of OSGeo-India at Map World Forum 2007

by K. S. Rajan

OSGeo-India actively participated and was well represented at the Map World Forum 2007, held in Hyderabad, during Jan 22-25, 2007. The major activities that the organization organized at this premier international forum of geospatial community were – (i) Keynote address on OSGeo by Gary Lang, Treasurer OSGeo (ii) OSGeo Workshop and (iii) OSGeo Exhibition Booth. In addition, the first meeting of the Executive council of OSGeo-India was held.

## OSGeo Workshop

The OSGeo workshop was conducted on 24<sup>th</sup> Jan, during the afternoon session. The main aim of this workshop was to provide for a platform to disseminate and educate the geospatial community of the enormous opportunities that FOSS4G provides, the advances and the level of technology development in order to provide effective geospatial solutions. During the workshop different models of development and use of FOSS tools and its potential in the domains of academia, government (mainly for organizations mandated with national development, and e-governance), and business were presented. The workshop also had the presence of other countries from Asia – China, Japan and Vietnam.

Prof. Deekshatulu, Ex-Director National Remote Sensing Agency, India, delivered the inaugural address and highlighted the advantages that FOSS tools provide for a large country like India, and in particular emphasized the advantages of the use of FOSS4G tools in the different decision making bodies of the country using these tools with Remote Sensing. He also applauded the timing of this effort and hoped that it will help mobilize the geospatial community in the country to spread the use of these technologies to a much wider public audience.

Mr. Geoff Zeiss of Autodesk shared the changes in the business ideas and how partnering with Open Source is of mutual benefit. He also emphasized the need for concerted efforts towards Open Standards and Open Content in addition to Open Source, which can help create further business opportunities and how it can help in building a Spatial IT ecosystem.

Dr. P.S.Roy, VP OSGeo and OSGeo-India Repre-

sentative, informed the audience about the efforts in the establishment of OSGeo-India and the plans including outreach, which it has set for itself in the short and mid-term. Some of the ongoing Indian initiatives taken up by organizations like NRSA/DOS, GSI, SACON, NIC, KELTRON, etc. were also shown in the presentation. He also mentioned the challenges and opportunities in the Indian context, especially with the establishment of Village Resources Centers and Krishi Vigyan Kendras, which are mandated to provide a range of services and information including geospatial information. He encouraged all the participants of the workshop to actively participate and contribute in developing a shared vision for the community.

Representatives of China, Japan and Vietnam gave an overview of the efforts of their respective chapters. Prof. Rongguo Chen, VP OSGeo and OSGeo-China Representative, showed the example of the work being carried out at localization, GRASS C-API, and the proposal to setup a GridGIS. While, Mr. Toru Mori, VP OSGeo and OSGeo-China Representative, gave a good example of how open source model is a good business proposition too. Prof. Venkatesh Raghavan, Board Member of OSGeo, in his closing remarks mentioned what the future has in store for the community and the long road ahead.

The workshop had an overwhelming response, with the room overflowing with participants/audience, and was estimated at over 95 persons.

## Exhibition Booth

OSGeo-India put up an Exhibition Booth during the Map World Forum, to showcase its efforts: the launch of the India Chapter, disseminate information on OSGeo-India, demonstrate some of the ongoing projects, and provide for a personal interaction between Chapter members and the geospatial community. It had a great response and had a continuous stream of visitors from all sectors. It is worth mentioning that a lot of them commended this effort and our objectives, and shared their views on its relevance to their respective work or organizations. A few of them also invited the Chapter to organize some events like tool demonstration and training in different parts of the country. A sizeable number re-

sponded positively and have agreed to continuously interact with OSGeo as users, partners, developers or promoters in their own respective organizations.

## OSGeo-India Meeting

The other important event that took place on the sidelines of the Map World Forum was the first meeting of the Executive Council of OSGeo-India. The council had a good discussion on how it would like to take the efforts forward and develop on the response at this first major activity. It has brought on board representatives of academia, government and industry to help make it an inclusive effort and has also consciously provided for a pan-India representation to the Chapter. Representatives of China, Japan and Vietnam attended the meeting as observers, and there was a discussion on how to build interaction and synergy between the different Chapters.

All these efforts of OSGeo-India were made possible by the generous financial support that was extended by the GNOME Foundation and OSGeo.org. OSGeo-India would like to thank these organizations

for the support that not only made the logistics of the event possible but also helped provide partial travel support for some delegates from Asia. It is hoped that such efforts will go a long way in fulfilling the objectives of our respective organizations, while looking forward to a continued interaction in the future.

OSGeo-India is now seeking to gain legal status as a non-profit organization in India which would help in promoting the cause and mission of OSGeo in India. Fundraising efforts to support training, software developing and localization has also been initiated. The OSGeo India Chapter is also planning to establish a website to disseminate and propagate the adoption and deployment of Open Source Geospatial solutions in India. Further details about the OSGeo-India Chapter activities can be obtained by contacting the address below.

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# 8<sup>th</sup> Annual Italian GRASS & GFOSS Meeting

by *Andrea Scianna*

The VIII edition of the Meeting of Italian GRASS & GFOSS (*Geographic Free Open Source Software*) users took place on February 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> in Palermo – Italy, organized by GISLAB at Dipartimento di Rappresentazione of University of Palermo<sup>2</sup>

The meeting registered a strong participation, from all Italian regions, of researchers, students, professionals, and public servants remarking the great interest towards *Geographic Free Open Source Software* in Italy, used in many different sectors (such as envi-

ronmental monitoring, processing, visualization and publication of geospatial information on workstations or via WEB, etc.)

Even if, in the past, the reference *Free and Open Source GIS* software has been GRASS, today there are many other GIS tools available for processing, visualizing and publishing on Internet of geospatial data such as MapServer<sup>3</sup>, QGIS<sup>4</sup>, PostGIS<sup>5</sup>, ka-Map<sup>6</sup>, Chameleon<sup>7</sup>, PyWPS<sup>8</sup>, and more.

The meeting was characterized by a program rich with events.

On February 14<sup>th</sup>, with the collaboration of Italian Society of Photogrammetry and Topography, the day entitled "Introduction to GIS" took place with

<sup>2</sup>GISLAB at Dipartimento di Rappresentazione of University of Palermo: <http://gislab.dirap.unipa.it/>

<sup>3</sup>MapServer: <http://mapserver.gis.umn.edu/>

<sup>4</sup>QGIS: <http://qgis.org/>

<sup>5</sup>PostGIS: <http://postgis.refrations.net/>

<sup>6</sup>ka-Map: <http://ka-map.maptools.org/>

<sup>7</sup>Chameleon: <http://chameleon.maptools.org/>

<sup>8</sup>PyWPS: <http://pywps.wald.intevation.org/index.psp>

the participation of professionals and people working in private companies or public administrations that deal every day with surveying and management of geospatial information.

In the same day some tutorials on Linux, and on GIS software (GRASS and QGIS) and on the WebGIS software MapServer were offered.

Topics of the main part of the meeting, held on February 15<sup>th</sup> and 16<sup>th</sup> were applications of Geographic Free and Open Source Software, such as geostatistical analysis, GIS techniques for environmental analysis, hydrogeology applications, heritage applications, interoperability, and WebGIS security.

During the meeting also topics of geospatial data standardization were discussed, as well as data exchange problems for public administrations, including intervention of the Italian government.

Besides the interest of public administration to the "Open Source" phenomenon, in Italy there is a strong community of scientists, developers and users that sustain the development of GFOSS. Some of them founded the *Associazione Italiana per l'Informazione Geografica Libera / GFOSS.IT* (Italian association for free geoinformation – [GFOSS.it](http://GFOSS.it)) during

the meeting.

The main goals of this new association are sustaining the development, diffusion and rights of Free and Open Source software, promoting open standards for geoinformation and free access to state-collected geospatial data, promoting relationships between people that constitute the Free and Open Source Geospatial Community. *GFOSS.it* intends to become the Italian OSGeo chapter.

The proceedings of the meeting are published on the meeting Web pages<sup>9</sup>

In the near future, the proceedings will also be published on the Web pages of Politecnico di Milano – Polo di Como<sup>10</sup> where papers of all previous Italian GRASS Meeting are published, starting with the year 2000.

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<sup>9</sup>GRASS/GFOSS meeting web page: [http://gislab.dirap.unipa.it/grass\\_meeting/index.htm](http://gislab.dirap.unipa.it/grass_meeting/index.htm)

<sup>10</sup>Proceedings published at Politecnico di Milano – Polo di Como: <http://geomatica.como.polimi.it/workbooks/>

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